

ELECTRO-OPTICAL DEVICES FROM POLYMER-STABILIZED LIQUID CRYSTAL MOLECULES

Abstract of the Disclosure

An electro-optic device includes a liquid crystal cell (10, 10') and at least
5 one electrode (40, 42, 40', 42') arranged to selectively electrically bias the liquid crystal
cell (10, 10'). A chiral or cholesteric liquid crystal (30, 30') is disposed in the liquid
crystal cell (10, 10'). The liquid crystal (10, 10') has an optic axis substantially along a
selected optic axis direction in the absence of an electrical bias. A polymeric network
(32, 32', 72) is disposed at an inside surface of the liquid crystal cell (10, 10'). The
10 polymeric network (32, 32', 72) extends partway into the liquid crystal cell (10, 10')
leaving at least a portion of the liquid crystal cell (10, 10') substantially free of the
polymeric network (32, 32', 72).